

## PROJECT DESCRIPTION

## I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL TO A MAST ARM STRUCTURE AT THE INTERSECTION OF MD 450 (ANNAPOLIS ROAD) AND GALLATIN STREET IN PRINCE GEORGE'S COUNTY. THE INTERSECTION IS PART OF THE MD 450 TRAFFIC SIGNAL SYSTEM.

MD 450 (ANNAPOLIS ROAD) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## II. INTERSECTION OPERATION

A SYSTEM READY BASE-MOUNTED CABINET AND CONTROLLER WITH ALL NECESSARY EQUIPMENT WILL BE INSTALLED AT THE INTERSECTION. THE INTERSECTION WILL CONTINUE TO OPERATE IN A FULLY-ACTUATED MODE USING 6 NEMA PHASES. THE GALLATIN STREET AND THE SHOPPING CENTER APPROACHES WILL OPERATE IN A SPLIT PHASE MODE. THE MD 450 MAINLINE APPROACHES WILL OPERATE CONCURRENTLY WITH EXCLUSIVE/PERMISSIVE LEFT-TURNS. EXISTING PEDESTRIAN MOVEMENTS SHALL BE UPDATED TO AN AUDIO COUNTDOWN PUSHBUTTON-ACTUATED OPERATION TO CROSS THE NORTH LEG OF GALLATIN STREET AND THE EAST LEG OF MD 450. CROSSWALKS ARE PROVIDED ACROSS THE SHOPPING ENTRANCES ON THE SOUTH SIDE OF MD 450.

VIDEO DETECTION CAMERAS SHALL PROVIDE PRESENCE DETECTION AND NON-INVASIVE PROBES SHALL PROVIDE ADVANCE DETECTION. THE INTERSECTION SIGNING HAS BEEN UPDATED.

## III. SPECIAL NOTES

THE CONTRACTOR SHALL PURCHASE AND DELIVER THE AUDIO PUSHBUTTONS AND 2-WIRE CENTRAL CONTROL UNIT FOR THE CONTROLLER CABINET TO THE SHA SIGNAL SHOP FOR INSTALLATION AND PROGRAMMING. THE CONTRACTOR SHALL CONTACT MR. EDWARD RODENHIZER, CHIEF, SIGNAL SHOP AT 410-787-7652 THREE (3) DAYS PRIOR TO DELIVERY OF THE EQUIPMENT.

## PROJECT CONTACTS

## 1. THE FOLLOWING ARE THE CONTACT PERSONS FOR THIS PROJECT:

MS. FELECIA MURPHY, ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 513-7358

MR. KEVIN NOWAK, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
PHONE: (301) 513-7385

MR. VERNON STINNETT, ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (310) 513-7304

MR. VICTOR GRAFTON, UTILITY ENGINEER  
PHONE: (310) 513-7350

MR. RICHARD DAFF, SR., CHIEF - TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

MR. EDWARD RODENHIZER, CHIEF - SIGNAL SHOP  
PHONE: (410) 787-7652

MR. SONNY BAILEY, CHIEF - SIGN SHOP  
PHONE: (410) 787-7676

THE POWER COMPANY REPRESENTATIVE:  
POTOMAC ELECTRIC POWER COMPANY (PEPCO)  
8300 OLD MARLBORO PIKE  
UPPER MARLBORO, MD 20772  
(310) 961-5325

## 2. MAINTENANCE OF TRAFFIC WILL BE PERFORMED BY THE CONTRACTOR UTILIZING THE STANDARD PLATES FOR TRAFFIC CONTROL FROM SECTION MD 104.00 OF THE SHA BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.

## 3. THE CONTRACTOR MUST MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.

## EQUIPMENT LIST 'A'

## A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

ITEM NO.	QUANTITY	DESCRIPTION
9140	1 EA	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER, VIDEO INTERFACE UNIT, 1-8 CAMERAS
9570	40 SF	SHEET ALUMINUM SIGNS (GROUND MOUNTED): S1-1(L) (36" x 36") "Pedestrian Crossing" SIGN (SYMBOLIC) W16-7p(L) (24" x 12") "DIAGONAL DOWN (LEFT) ARROW" R6-1(R) (36" x 12") "ONE WAY" R4-7(1) (18" x 30") "Narrow Keep Right" SIGN (SYMBOLIC) OM1-1 (18" x 18") "Object Marker" SIGN
9571	125 SF	SHEET ALUMINUM SIGNS MAST ARM/POLE MOUNTED: D-3(1) (VAR. x 16") MAST ARM-MOUNTED, "LEFT ARROW, GALLATIN STREET" D-3(1) (VAR. x 16") MAST ARM-MOUNTED, "RIGHT ARROW, GALLATIN STREET" D-3(1) (VAR. x 16") MAST ARM-MOUNTED, "ANNAPOLIS ROAD", DUAL-FACED R3-5(L) (30" x 36") MAST ARM-MOUNTED, "ONLY, LEFT ARROW" R3-6(1) (30" x 30") MAST ARM-MOUNTED, "LEFT, THRU, RIGHT ARROWS" R10-3(1) (9" x 15") POLE-MOUNTED PEDESTRIAN SIGNS "PUSH BUTTON TO CROSS GALLATIN STREET" R10-3(1) (9" x 15") POLE-MOUNTED PEDESTRIAN SIGNS "PUSH BUTTON TO CROSS ANNAPOLIS ROAD" M1-5(6) "WEST, MD 450, LEFT ARROW" (48"x72") POLE-MOUNTED M1-5(6) "EAST, MD 450, LEFT ARROW" (48"x72") POLE-MOUNTED M1-5(6) "WEST, MD 450, RIGHT ARROW" (30"x51") POLE-MOUNTED

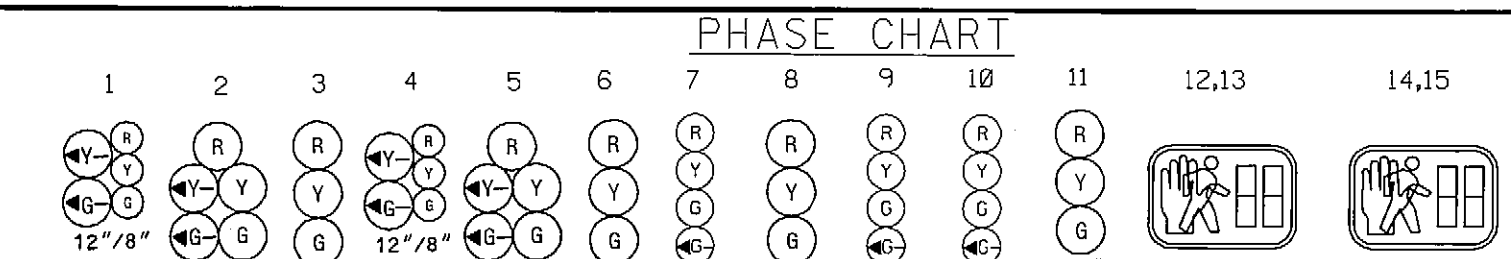
## EQUIPMENT LIST 'B'

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

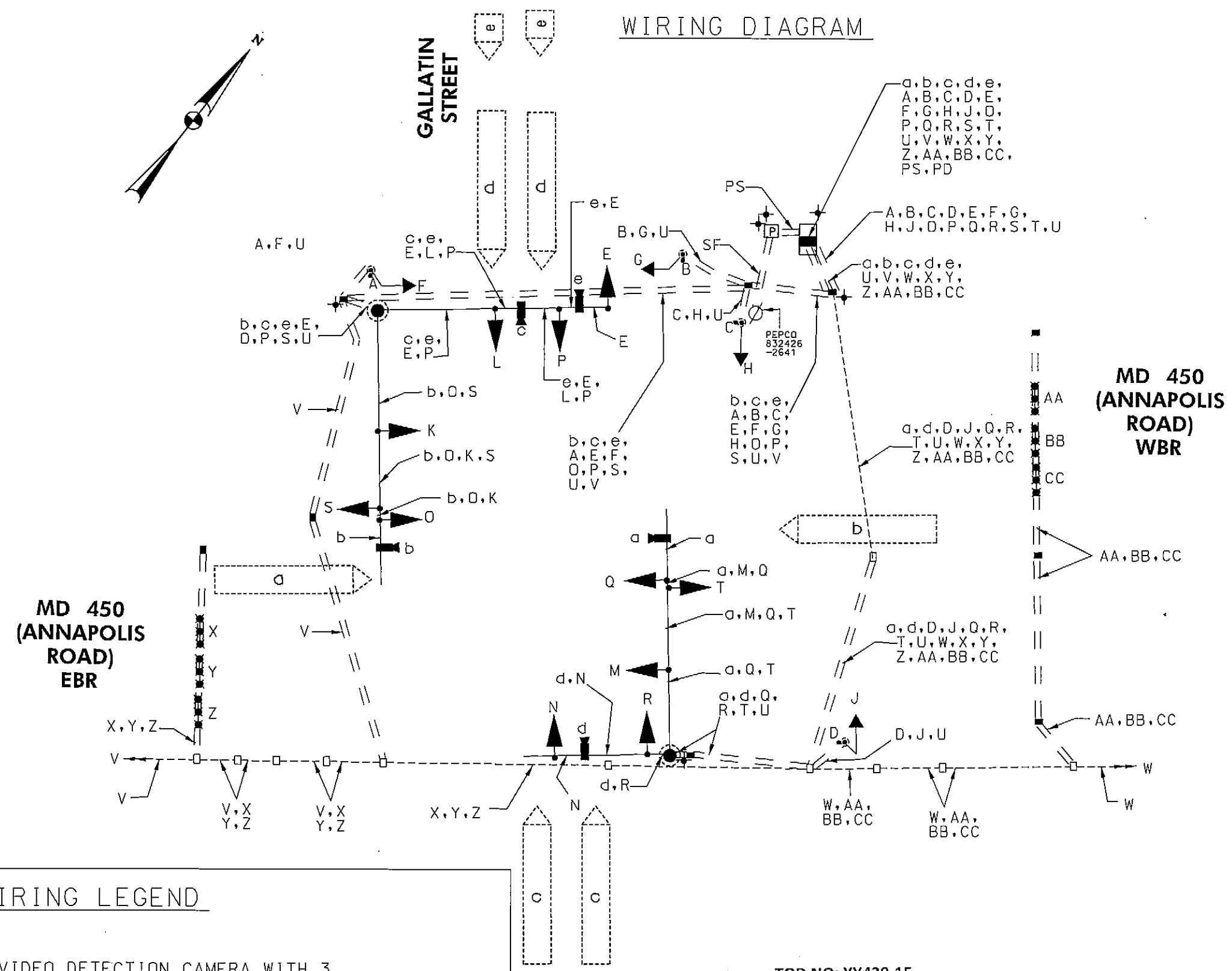
ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC
2001	25 CY	CLASS 2 EXCAVATION
2002	5 CY	TEST PIT EXCAVATION
5002	40 LF	5" WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5003	605 LF	REMOVAL OF EXISTING PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5004	562 LF	12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5005	175 LF	24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5006	54 SF	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROWS
6001	400 LF	STANDARD TYPE 'A' COMBINATION CURB AND GUTTER: 12" GUTTER PAN AND 8" CURB
6002	1700 SF	5" CONCRETE SIDEWALK
6003	112 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	38 EA	12" LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8004	6 EA	8" LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8005	4 EA	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
8009	4 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL WITH BYPASS SWITCH
8014	1 EA	INSTALL CONTROLLER AND CABINET, BASE-MOUNTED
8016	4 EA	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
8023	6 EA	NON-INVASIVE DETECTOR (ANY LENGTH)
8024	1 EA	REMOVE & DISPOSE MATERIAL & EQUIPMENT PER JOB
8026	2 EA	TWIN MAST ARM POLE & 50'/60' ARMS, 15 FOOT "T" DIM.
8029	5 EA	VIDEO DETECTION CAMERA & CABLE UP TO 500'
8031	150 LF	ELECTRICAL CABLE, 1-CONDUCTOR 2/0 AWG THHN/THWN
8034	690 LF	DISCONNECT, PULL-BACK & RE-ROUTE EXIST. CABLES
8038	35 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - BORED
8039	315 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - SLOTTED
8040	270 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED
8041	146 LF	WOOD SIGN SUPPORTS UP TO 4" x 6"
8042	165 SF	INSTALL OVERHEAD OR GROUND-MOUNTED SIGNS INCLUDING ALL HARDWARE
8044	400 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	30 LF	ELECTRICAL CABLE, 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8048	9 EA	FURNISH & INSTALL ELECTRICAL HANDHOLE
8053	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8055	420 LF	ELECTRICAL CABLE, 2-CONDUCTOR NO. 14 AWG
8056	550 LF	ELECTRICAL CABLE, 5-CONDUCTOR NO. 14 AWG
8058	1350 LF	ELECTRICAL CABLE, 7-CONDUCTOR NO. 14 AWG

## EQUIPMENT LIST 'C'

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



Phase 1 & 5	<G/R	<G/R	R	<G/R	<G/R	R	R	R	R	R	R	DW	DW	
1 & 5 Change	<G/G	<G/G	G	R	R	R	R	R	R	R	R	DW	DW	
Phase 1 & 6	<G/G	<G/G	G	R	R	R	R	R	R	R	R	DW	DW	
1 Change	<Y/G	<Y/G	G	R	R	R	R	R	R	R	R	DW	DW	
Phase 2 & 5	R	R	R	<G/G	<G/G	G	R	R	R	R	R	DW	DW	
5 Change	R	R	R	<Y/G	<Y/G	G	R	R	R	R	R	DW	DW	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	WK	DW	
Ped. Clear & Countdown	G	G	G	G	G	G	R	R	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW	
Phase 3	R	R	R	R	R	R	<G	G	R	R	R	DW	DW	
3 Change	R	R	R	R	R	R	Y	Y	R	R	R	DW	DW	
Phase 3 Alt.	R	R	R	R	R	R	<G	G	R	R	R	DW	WK	
Ped. Clear & Countdown	R	R	R	R	R	R	<G	G	R	R	R	DW	FL/DW	
3 Alt. Change	R	R	R	R	R	R	Y	Y	R	R	R	DW	DW	
Phase 4	R	R	R	R	R	R	R	R	<G	G	G	DW	DW	
4 Change	R	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	



## WIRING LEGEND

a.b.c.d.e	- VIDEO DETECTION CAMERA WITH 3 CONDUCTOR NO. 18 AWG LEAD-IN CABLE
A.B.C.D	- 2 CONDUCTOR NO. 14 AWG ELEC. CABLE
F.G.H.J	- 5 CONDUCTOR NO. 14 AWG ELEC. CABLE
K.L.M.N	- 5 CONDUCTOR NO. 14 AWG ELEC. CABLE (JUMPER)
E.O.P.Q, R.S.T.	- 7 CONDUCTOR NO. 14 AWG ELEC. CABLE
U	- NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
V.W	- EXISTING INTERCONNECT CABLE (TO BE PULLED BACK AND RE-ROUTED TO NEW CONTROLLER)
X.Y.Z.AA, BB.CC	- NON-INVASIVE MICRO-LOOP PROBES W/ LEAD-IN CABLE
PS	- 1 CONDUCTOR NO. 8 AWG-THHN/THWN ELEC. CABLE
SF	- 1 CONDUCTOR ELECTRICAL CABLE NO. 2 AWG-THHN
+	- GROUND ROD (3/4" DIA. x 10' LENGTH)

TOD NO: XX439-15  
SHA NO: PG995858  
MD 450 at Gallatin Street



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 450 (ANNAPOLIS ROAD)  
AND GALLATIN STREET

HYATTSVILLE, MARYLAND

## GENERAL INFORMATION SHEET

SCALE: 1" = 20', ADVERTISED DATE: JUNE 2012, CONTRACT NO.: XX4395185

DESIGNED BY	ENB	COUNTY	PRINCE GEORGE'S
DRAWN BY	ENB	LOGMILE	016045003.34
CHECKED BY	MR / NMR	TIMS NO.	K-040
F.A.P. NO.	SEE TITLE SHEET	TOD NO.	

TS NO. 118B	DRAWING SG-02 OF 2	SHEET NO. 2 OF 2
-------------	--------------------	------------------

**CENTURY**  
ENGINEERING  
CONSULTING ENGINEERS - PLANNERS  
10710 GILROY ROAD  
HUNT VALLEY, MD 21031

REVISION 'B' CEI # 101195.75

PLOTTED: Monday, May 21, 2012 AT 01:19 PM  
FILE: S:\2010\Transportation\101195.75 MD 450 at Gallatin Street\CADD\ACAD Sheet\p993-P002\_MD450.dgn